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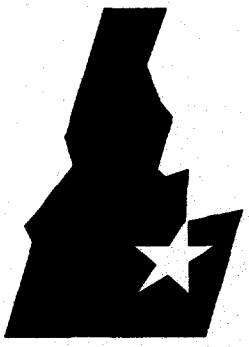

Idaho
National
Engineering
Laboratory

Idaho Chemical Processing Plant Process Efficiency Improvements

Brad Griebenow

Lockheed
Idaho Technologies Company

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ABSTRACT

In response to decreasing funding levels available to support activities at the Idaho Chemical Processing Plant (ICPP) and a desire to be cost competitive, the Department of Energy Idaho Operations Office (DOE-ID) and Lockheed Idaho Technologies Company have increased their emphasis on cost-saving measures. The ICPP Effectiveness Improvement Initiative involves many activities to improve cost effectiveness and competitiveness. This report documents the methodology and results of one of those cost cutting measures, the Process Efficiency Improvement Activity.

The Process Efficiency Improvement Activity performed a systematic review of major work processes at the ICPP to increase productivity and to identify nonvalue-added requirements. A two-phase approach was selected for the activity to allow for near-term implementation of relatively easy process modifications in the first phase while obtaining long-term continuous improvement in the second phase and beyond. Phase I of the initiative included a concentrated review of processes that had a high potential for cost savings with the intent of realizing savings in Fiscal Year 1996 (FY-96.) Phase II consists of implementing long-term strategies too complex for Phase I implementation and evaluation of processes not targeted for Phase I review. The Phase II effort is targeted for realizing cost savings in FY-97 and beyond.

DISCLAIMER

EXECUTIVE SUMMARY

In response to decreasing funding levels available to support activities at the Idaho Chemical Processing Plant (ICPP) and a desire to be cost competitive, the U.S. Department of Energy Idaho Operations Office (DOE-ID) and Lockheed Idaho Technologies Company have increased their emphasis on cost-saving measures. As shown in the tabulation to the right, the ICPP Effectiveness Improvement Initiative involves many activities to improve cost effectiveness and competitiveness. This report documents the methodology and results of one of those cost-cutting measures, the Process Efficiency Improvement Activity.

ICPP Effectiveness Improvement Initiative.
- Budget allocation reduction
- Process efficiency improvement activity (Phase I)
- HLW work package budget review
- SNF work package budget review
- Infrastructure work package budget review
- Rover turnback
- Electrical upgrade project reductions
- Process efficiency improvement activity (Phase II)
- Additional future activities

During the last quarter of Fiscal Year 1995 (FY-95), a cost evaluation team consisting of members from DOE-ID and Lockheed Idaho conducted a joint evaluation of nine ICPP work processes and associated costs at ICPP. The team identified the steps associated with completing the work processes, assigned costs to complete the steps, and identified the "low value" steps that, if eliminated, would generate cost savings without adversely affecting the product. The conclusion of the evaluation, as documented in the "Wichmann Report," was that about 13% of the steps associated with these nine processes did not add value. The study also determined that the vast majority of the nonvalue-added activities were required by current orders, procedures, and regulations; and "the total reinvestment [based on resource allocation] will not be realized for at least 2 years from initial re-engineering." One of the recommendations in the Wichmann Report was to "initiate a systematic review of major work processes at the Idaho Chemical Processing Plant using activity-based management techniques to increase productivity and to identify nonvalue-added requirements." The Process Efficiency Improvement Activity was started to fulfill this recommendation and to realize some of the cost-saving potential identified in the report.

A two-phase approach was selected for the activity to allow for near-term implementation of relatively easy process modifications in the first phase while obtaining long-term continuous improvement in the second phase and beyond. Phase I of the initiative included a concentrated review of processes that had a high potential for cost savings with the intent of realizing savings in FY-96. Phase II consists of implementing long-term strategies too complex for Phase I implementation and evaluation of processes not targeted for Phase I review. The Phase II effort is targeted for realizing cost savings in FY-97 and beyond.

To kick off Phase I of the initiative, a steering team of DOE-ID and Lockheed Idaho managers reviewed the 11 product lines supported at ICPP and rated each product line based on the perceived potential for cost savings. To keep the initiative manageable, the seven highest-rated functional areas were selected for detailed review during Phase I. Teams were established to review the processes involved in each of the functional areas. In instances where a functional area was too large for review by a single team, the area was subdivided and reviewed by additional teams. Ultimately, 11 improvement teams consisting of approximately 100 DOE-ID and Lockheed Idaho employees were established to review work processes in the functional areas. Based on the two-phase approach, the teams were requested to identify (a) Phase I process improvement recommendations that would result in near-term savings (those that could be realized during the

second quarter of FY-96) and (b) Phase II recommendations not suitable for immediate implementation but with potential for cost savings during outyear budgets.

By the end of Phase I, the teams had identified 125 recommendations for process improvements. The steering team reviewed the recommendations and, during a 2-day facilitated session, evaluated each. Recommendations were evaluated based on their feasibility for implementation, elimination of nonvalue-added activities, and potential for cost savings. The steering team rejected seven recommendations, based on regulatory, safety, or implementation concerns. The remaining recommendations were reviewed to combine related recommendations and to broaden recommendations that could be applied to other areas of the plant. The steering team then determined whether the recommendations could be implemented in Phase I or had to be further investigated prior to implementation in Phase II. Forty-six recommendations were approved for Phase I implementation. An additional 29 recommendations were identified for implementation during Phase II.

For each of the Phase I recommendations, cost savings were estimated and the control accounts used to fund the improved activity were identified. Rough-order-of-magnitude cost-saving estimates were also established for the recommendations identified for Phase II and will be refined as Phase II of the initiative continues. As shown in Table 1, the first phase of the Process Efficiency Improvement Activity has identified more than $17M in estimated annual cost savings subsequent to implementation of the Phase I and Phase II recommendations.

Table 1. ICPP Effectiveness Improvement Initiative estimated cost savings.

Title	Annual Savings	FY-96 Savings
Improvement Team (Phase I)	**$4,434,900**	**$1,862,632**
Paperwork/Review Reduction	$837,100	$543,210
Monitoring	$1,135,500	$485,700
Spent Fuel Operations	$570,800	$50,400
High Level Waste Operations	$458,600	$95,100
Plant Operations (General)	$210,400	$89,930
Balance of Plant	$1,222,500	$598,292
Phase II	**~$12,800,000**	**$0**
TOTAL	**~$17,200,000**	**$1,862,632**

ACKNOWLEDGMENTS

Phase I of the Process Efficiency Improvement Activity required the support of a large number of people. The commitment of those involved in this activity, from steering team members to improvement team members, ensured the activity's successful completion. Team member participation is greatly appreciated. Team members are as follows:

Sponsors
Mark Arenaz
Pete Dirkmaat
Richard Gurley
Bill Jensen
Toney Mathews
Paul Yela

Initiative Leaders
Dennis Schmidt
Brad Griebenow
Jim Valentine

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Ben Hunter
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Craig Olson
Kent Oswald
Tony Salcido
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Lee Bendixsen, team leader
Kenny Custer
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Bryan Crofts
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Mike Myler
Bob Norris

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Craig Olson, champion
RadCon Team
Frank Hinkley, team leader
Steve Aitken
Dave Diaz
Bob Mozes
Lex Strain
Alan Wood

ES&H (Cont.)
Industrial Hygiene Team
Ron Bone, team leader
Tom Byrnes
Jim Downes
Kim Steed
Julie Waddell

High Level Waste
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Calcination Team
Kip Winter, team leader
Doug Archibald
Griff Colson
Angela Dismuke
Keith Fry
Mike Greene
Dave Heasley
Mike Ison
Dennis Norwood
Dan Palmer
Waste Processing Team
Earl McMahen, team leader
Kevin Barton
Bob Davis
Dick Frasure
Ron Hastings
Steve Martin
Blake Maxfield
Joe Parrette
Brady Talbot
Frank Ward
Separations Team
Ron Woodworth, team leader
John Arrowood
Jim Barker
Julie Merrill
Dave Olsen
Charles Posegate

Infrastructure
Russ Stuart, champion
Utilities Team
Brian Gustaveson, team leader
Wade Anderson
Dave Diaz
Charlie Fromer
Leon Pruett
Dave Suhre
Bill Verlanic
Landlord Team
Jack Simonds, team leader
Lloyd Brittain
Thayne Lords
Heavy MacFarlane
Bob Marcinko
Don Wood

Quality Assurance
Alan Grow, champion
Mike Wilberg, team leader
Mary Baker
Larry Davis
Sandra Drussel
Gary Keith
Dave Peterson
Tony Salcido

CONTENTS

INTRODUCTION

Purpose

The Idaho Chemical Processing Plant (ICPP) is in the process of a multifaceted approach to reducing the cost of doing business. Some of the aspects of cost-saving activities are listed below:

- Budget allocation reduction
- Process efficiency improvement activity (Phase I)
- High Level Waste work package budget review
- Nuclear Fuel work package budget review
- Infrastructure work package budget review
- Rover turnback
- Electrical upgrade project reductions
- Process efficiency improvement activity (Phase II)
- Additional future activities.

These combined activities comprise the ICPP Effectiveness Improvement Initiative. Although this report focuses on the methodology and results of the Process Efficiency Improvement Activity, it is important to understand that the overall savings ultimately achieved in FY-96 will be a combination of savings from each of these efforts. To give the "big picture" of the ICPP Effectiveness Improvement Initiative, two additional aspects of the initiative, the budget allocation reduction and High Level Waste work package budget review, are briefly discussed below. The remainder of the report provides detailed information on the Process Efficiency Improvement Activity.

Background

The FY-96 budget submitted to Congress by the President included nearly $205.9M for the U.S. Department of Energy Idaho Operations Office (DOE-ID) to conduct stabilization and waste management activities at ICPP. As Congressional action on the FY-96 budget proceeded and FY-95 drew to a close, it became apparent that the FY-96 budget for ICPP would be significantly lower than the requested amount, perhaps as much as 15%. In response, DOE-ID and Lockheed Idaho Technologies Company elected to restrain the ICPP programs in FY-96 to reflect this anticipated funding reduction. Budget exercises based on the 85% funding case resulted in $30M worth of activities falling "below the line," leading to the desire to identify an equal amount of cost savings within the 85% of funded activities to bring the unfunded activities back "above the line."

The funding restrictions imposed by DOE-ID and Lockheed Idaho reduced the scope of some ongoing ICPP programs and delayed the start of others. Technology development projects needed to support ultimate disposal of highly radioactive liquid and solid waste and spent nuclear fuel were impacted the most. Delays in these programs would significantly impact DOE-ID and Lockheed Idaho's ability to meet the long-term commitments contained in the agreement just reached between DOE, the Navy, and the State of Idaho, referred to as the Batt Settlement Agreement. These impacts made it essential that DOE-ID and Lockheed Idaho work together to determine if appropriate work was being methodically conducted, properly funded, and efficiently performed.

Actions

Beginning in late FY-95, DOE-ID and Lockheed Idaho initiated an aggressive approach to streamline ICPP activities to attain higher levels of operating effectiveness and efficiency. Streamlining was intended to reduce the cost of completing the funded work and, thereby, generate funding for other workscope. The effort was viewed as a critical part of DOE-ID and Lockheed Idaho's plan for timely completion of ICPP mission objectives within the anticipated funding levels. The multifaceted approach to streamlining included steps to ensure full funding of activities critical to the completion of the Batt Settlement Agreement. An effort was completed to develop work packages that met the budget allocation reduction. The Process Efficiency Improvement Activity included systematic work process reviews to identify inefficiencies and recommend improvements. A High Level Waste work package budget review was performed to ensure appropriate funding was allocated in the cost accounts to support priority work.

Budget Allocation Reduction

In late FY-95, work packages were developed to baseline FY-96 ICPP activities. These work packages were built around the assumption that the full $205.9M budget request would be obtained by DOE-ID. The budget finally appropriated, however, was approximately $191.4M. To support this budget reduction, Lockheed Idaho reviewed work packages and eliminated low priority work scope. In many instances, this review identified activities not necessary to fulfill the ICPP mission and their elimination resulted in more effective operations. Unfortunately, the reduction also included work scope considered critical to meeting the Batt Settlement Agreement. The critical work scope eliminated was targeted for reinstatement as additional funds were made available through cost-saving measures.

Process Efficiency Improvement Activity

In early FY-96, the Process Efficiency Improvement Activity was started using a structured review method patterned after the ICPP Cost Evaluation completed in September 1995. The activity focused on identifying process inefficiencies and recommending improvements. The goal was to identify measures that would streamline work processes at ICPP and allow FY-96 work scope to be accomplished with fewer resources than originally planned. Senior DOE-ID and Lockheed Idaho managers jointly sponsored the initiative led by a steering team of ICPP managers. The primary purpose of this report is to document the methodology and results of this initiative.

High Level Waste Work Package Budget Review

As a result of the December 1995 baselining effort to support the reduced budget allocation, the revised work packages documented work scope considered paramount to fulfilling the ICPP mission. A budget review was then performed to ensure that the level of funding associated with the work scope was appropriate and reflected the degree of priority for each activity. Budget modifications were completed to reflect changes resulting from reevaluation of required resources, cost variances from the first 4 months of the year already lapsed, and areas with identified potential for cost underruns. The necessity to free up funds to be reallocated to the currently unfunded Batt Settlement Agreement activities drove decisions to eliminate procurements, vehicles, and travel, not critical to meeting the ICPP mission.

METHODOLOGY

Cost Evaluation

To understand costs associated with activities at the ICPP, a joint DOE-ID/Lockheed Idaho evaluation team, led by Tom Wichmann and Greg Frandsen, was formed in the last quarter of FY-95. The team used activity-based management to simplify its evaluation process. The team prepared flow charts on nine ICPP business processes. The flow charts were used to develop resource diagrams identifying each step of the procedure, elapsed time, person hours and skills, and documents associated with the activity. Key information gathered by the team was a value-added estimate of each activity and a link between the activity and its associated requirements. The review, as documented in the "Wichmann Report," concluded that 13% of activities performed were nonvalue-added. It also concluded that the vast majority of the nonvalue-added activities were required by current orders, procedures, and regulations. The potential for resource reallocation, based on elimination of the nonvalue-added activities, was expected to take at least 2 years to be fully realized.

The Wichmann evaluation team identified three major issues and formulated recommendations for each. The first recommendation was to clarify roles and responsibilities at both ICPP and DOE-ID. The second recommendation was to improve program control. The final recommendation was to "initiate a systematic review of major work processes at the Idaho Chemical Processing Plant using activity-based management techniques to increase productivity and to identify nonvalue-added requirements." Based on this recommendation, DOE-ID and Lockheed Idaho management developed the Process Efficiency Improvement Activity to review work processes with the intent of identifying cost savings that could be reallocated to unfunded activities.

Strategy

Recognizing the imminent nature of the budget concerns, as well as the need for long-term self-sustaining continuous improvement, the sponsors defined a two-phased approach (Figure 1.) Phase I of the activity included a concentrated review of processes with a high potential for near-term cost savings with the intent of realizing savings in early 1996. Phase II consists of the implementation of long-term recommendations, evaluation of processes not targeted for Phase I, and consideration of issues raised but not addressed during Phase I.

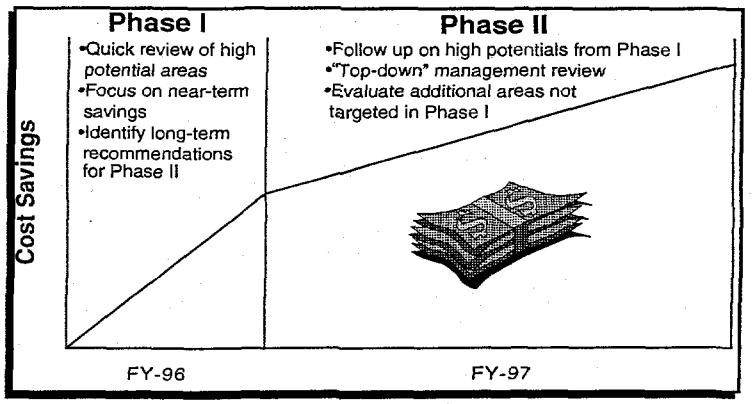

Figure 1 Two-phase approach

Phase I Structure

The activity was structured to ensure appropriate involvement of individuals from different levels that represented different perspectives of work at the ICPP. Specific roles and expectations were defined for the steering team, champions, advisors, and improvement team members as shown in Figure 2.

Sponsors of the activity established a steering team of DOE-ID and Lockheed Idaho managers involved in much of the ICPP work. The steering team identified functional areas with high potential for improvement and cost savings, formed teams to appropriately evaluate the underlying processes, provided support and removed barriers for teams, and reviewed and approved recommendations.

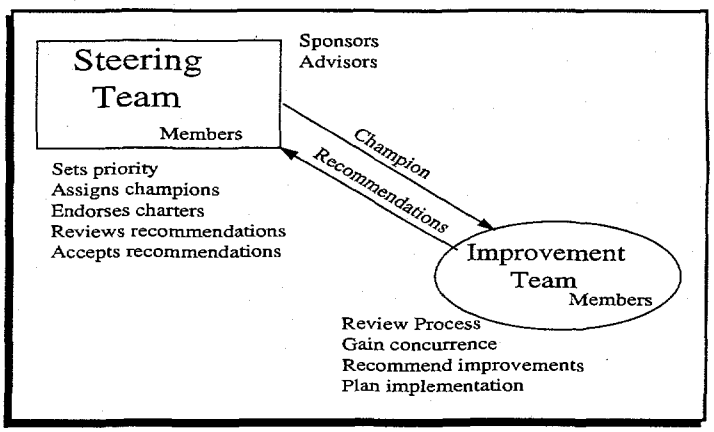

Figure 2 Team roles

The steering team appointed team champions for each of the functional areas identified for Phase I review. The team champion worked with a team of advisors (selected by the steering team) to target specific work processes in the functional areas. The targeted work processes were selected based on performance frequency, work complexity, process requirements, and allocated budget. Champions were also responsible for forming and mentoring process improvement teams to review targeted processes. Champions provided a link between the steering team and the improvement teams.

Improvement teams were formed to evaluate work processes. The teams of Lockheed Idaho and DOE-ID individuals, who were actively involved in the process to be evaluated, included process performers, customers, auditors, and suppliers. Facilitators were also part of the teams.

Phase I Process

During the activity kickoff meeting, the steering team evaluated the Lockheed Idaho work breakdown structure (including the associated control accounts) to identify the primary ICPP operations and cross-cutting services. These product and service areas contained a number of activity centers that became prime candidates for streamlining. In a session facilitated by Total Quality Management (TQM), the steering team reviewed the activity centers and prioritized the candidates based on perceived cost-improvement potential. The steering team considered such factors as:

- Total cost of the candidate activity
- Potential for saving a significant portion of the candidate's cost
- Repetitive nature of the work for which savings could be realized (i.e., one-time or multiple work activities)
- Perceived nonvalue-added content of the activity
- Complexity of the activity (i.e., amount of time required to perform the activity)
- Likelihood that appreciable savings could be achieved in the near term.

Seven of the 11 product and service areas were selected for detailed review during Phase I. These seven areas included the three operation activity centers and four cross-cutting service centers. The steering team identified a management champion for each of the seven areas, ensuring that the champions did not have direct management responsibility for their assigned activity center. Champions were provided with a team of advisors knowledgeable about the work processes and funding for the respective functional areas. The champion and advisors further refined the focus of the process review by identifying specific processes that had high potential for improvement and cost savings. Champions then formed process improvement teams of individuals directly involved in the work processes. Ultimately, 11 improvement teams, as shown in Figure 3, consisting of approximately 100 DOE-ID and Lockheed Idaho employees were established to review work processes in the functional areas. The teams were requested to define Phase I recommendations that would result in near-term savings and identify Phase II recommendations that might not be suitable for immediate implementation but that may have potential for cost savings in subsequent budget years.

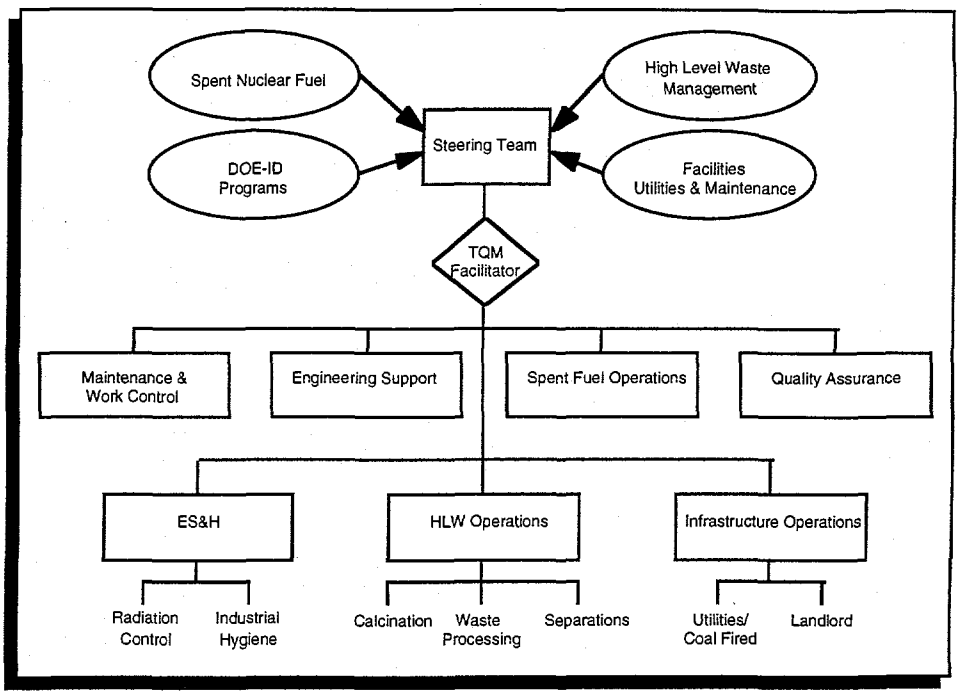

Figure 3 Effectiveness improvement structure

Improvement teams evaluated work processes following a systematic process improvement model that included defining the existing process, evaluating the process, developing alternatives and making recommendations. Several TQM tools were used throughout teams' activities and included brainstorming techniques, flow charting, requirements analysis, priority setting, cycle-time estimating, and benchmarking.

Defining the existing process was typically accomplished by developing a process flow chart. For each step in the process, teams identified the source of the associated requirements, the resources applied, and the expected outcomes or functional requirements. The teams focused a significant part of their reviews on understanding the requirements that drove the steps in the process.

Step two of the process compelled teams to critically evaluate each activity represented in the process flow chart to determine if the activity adds value, is performed efficiently, and contributes to the desired result. Particular emphasis was placed on challenging those requirements determined to add minimal value to the end product.

For each activity determined inefficient or nonvalue-added, the team proposed an alternative solution. In some cases activities were simply eliminated. In others, more efficient processes were developed. Teams tested their proposed solutions by interviewing knowledgeable personnel,

benchmarking INEL and other organization approaches, and reviewing requirements.

Recommendations were formulated to represent proposed process improvements. Recommendations were submitted to the steering team in written form and presented for evaluation by the team leader. Included in the recommendations was a description of the current process, the proposed change(s), justification for the change, advantages and disadvantages resulting from implementing the change, and estimated cost savings. Teams included data to support their cost estimates, identified issues associated with implementing the change, and suggested implementing actions and responsible individuals.

Steering team members reviewed each of the written recommendations to identify any questions or need for clarification. The steering team met in a 2-day facilitated session to listen to the team leaders present recommendations and to evaluate each recommendation. The steering team evaluated recommendations based on their ability to improve work at ICPP, save cost, and add value.

RECOMMENDATIONS

The improvement teams submitted 125 recommendations to the steering team for approval. Of these, seven recommendations were eliminated due to regulatory, safety, or implementation concerns. The remaining recommendations were reviewed to identify related recommendations that could be combined as well as to identify recommendations that could be broadened to other areas beyond the original improvement team's area. The steering team then determined whether the recommendations should be implemented in Phase I or Phase II, with a bias for action to move as many recommendations into Phase I as possible. The implementing actions associated with most recommendations could not be completed immediately, but aggressive schedules were developed for completing the actions and cost savings were calculated based on the scheduled implementation date.

Phase I

After combining related recommendations, 46 recommendations were approved for Phase I implementation. These recommendations were grouped into six categories: Paperwork/Review Reduction, Monitoring, Spent Fuel Operations, High Level Waste Operations, General Plant Operations, and Balance of Plant. Appendix A contains a brief description of the recommendations approved for Phase I implementation as well as the action items that must be completed to realize the identified cost savings. The identified cost savings were used to develop a change control package to allow reallocation of the funds to unfunded priority work.

Phase II

As a result of the Phase I improvement team actions, 29 recommendations were identified for implementation during Phase II and additional recommendations will be generated during Phase II. A Phase II action plan will be developed and initiated in the second quarter of FY-96. This action plan will consist of three basic elements:

1. A "top-down" senior management review to eliminate unnecessary ICPP work scope and extend the impact of the Phase I recommendations.
2. Implementation of "longer term" recommendations identified in Phase I and extension of some recommendations to additional ICPP processes.
3. Identification of recommendations in areas not previously investigated.

RESULTS

Phase I

For each of the Phase I recommendations, the cost-saving estimate was tied to one or more control accounts that funded the improved activity. Typically, the estimated cost savings was calculated based on a full year of operation; therefore, to determine the FY-96 cost savings, the estimated total savings was reduced due to the fact that implementation would not occur until 5 or 6 months into the year. Additionally, the cost for implementing the recommendations, from activities such as changing procedures or technical specifications, was deducted from the total estimated savings to obtain the correct FY-96 cost savings amount. Table 2, on the following page, lists the Phase I recommendations and the associated annual and FY-96 cost savings. Appendix B provides a spreadsheet with the calculated annual cost savings, FY-96 cost savings, and associated control accounts.

Phase II

The Phase II recommendations are listed in Table 3, along with the estimated cost savings. The cost-saving estimates provided are rough-order-of-magnitude estimates, since the recommendations have not been fully investigated at this time. Phase II recommendations are targeted to result in cost savings in FY-97 and beyond. As previously stated, a Phase II action plan will be developed and initiated during the second quarter of FY-96.

Table 2. Phase I recommendations and cost savings

Title	Annual Savings	FY-96 Savings
Phase I Total Cost Savings	**$4,434,900**	**$1,862,632**
PAPERWORK/REVIEW REDUCTION (Subtotal)	**$837,100**	**$543,210**
Increase Use of Job Safety Analyses	$135,000	$88,630
Streamline Occurrence Reporting	$541,800	$353,200
Eliminate Test Results Review Team	$36,000	$30,400
Streamline Review of Plant Changes	$75,800	$40,300
Improve Graded Approach of Quality Levels	$48,500	$30,680
MONITORING (Subtotal)	**$1,135,500**	**$485,700**
Reduce Bioassay Samples	$375,000	$200,000
Reduce RadCon Techs Required for Moving Hot Dirt	$0	$27,600
Reduce 603 Basin Water Sampling	$233,300	$115,000
Reduce FAST Basin Water Monitoring	$103,600	$57,100
Reduce FAST Stack Monitoring	$29,600	$29,600
Improve Process for Obtaining Radiological Instrument Readings	$0	$0
Modify RadCon Tech Utilization During Off-Shifts	$75,000	$0
Reduce Main Stack Monitoring	$147,300	$0
Reduce Tank Farm Monitoring	$99,000	$0
Reduce Percolation Pond Checks	$14,400	$8,600
Reduce Number of Sample Trip Blanks	$1,600	$1,100
Obtain WCF Readings Remotely	$36,900	$23,900
Reduce Deep Tank Monitoring	$19,800	$14,900
Reduce Bulk Chemical Readings	$0	$7,900
SPENT FUEL OPERATIONS (Subtotal)	**$570,800**	**$50,400**
Reduce Fuel Charger Wrappings	$529,600	$10,000
Modify Cask Water Filling Procedure	$0	$0
Eliminate Unnecessary Cask Surveys	$35,000	$35,000
Implement Lift Ring Stand	$1,200	$400
Streamline Fuel Movement Plan Development	$5,000	$5,000
HIGH LEVEL WASTE (HLW) OPERATIONS (Subtotal)	**$458,600**	**$95,100**
Improve HLW Operator Utilization	$435,000	$58,000
Reduce FPF Electrical Power Costs	$10,500	$10,500
Reduce New Fuel Processing Facility (FPF) S&M	$13,100	$13,100
Eliminate Unnecessary Waste Calcine Facility Work Orders	$0	$13,500
Eliminate Rover As-builts	$0	$0
PLANT OPERATIONS (Subtotal)	**$210,400**	**$89,930**
Eliminate Step-off Shoe Covers	$12,000	$0
Eliminate Dynamometer Usage	$4,700	$900
Reduce Rigging/Crane Checks	$44,700	$14,200
Reduce SO Testing Signatures	$24,600	$24,600
Modify Load Testing Procedure	$12,900	$8,030
Reduce Megger & Continuity Testing	$37,500	25,000
Downgrade Calibrations	$74,000	$17,200
BALANCE OF PLANT (Subtotal)	**$1,222,500**	**$598,292**
Streamline Utility Outage Approvals	$6,000	$3,000
Streamline Fire Extinguisher Checks	$4,500	$3,000
Improve PM Program	$51,500	$51,500
Improve Office and Storage Facility Utilization	$224,000	$111,000
Inactivate Surplus Facilities	$84,100	$84,170
Conserve Electricity	$200,000	$200,000
Eliminate Unnecessary Respirator Training	$88,300	$32,542
Modify Freeze Protection Approach	$127,200	$95,080
Eliminate Bulk Liquid Nitrogen	$44,400	$18,000
Reduce Use of Plant Blue Coveralls	$392,500	$0

Table 3. Phase II recommendations and estimated cost savings

Title	Annual Savings
PHASE II	**$12,785,800**
Implement Plant Work Control Process	$5,000,000
Streamline Engineering Support	$5,000,000
Streamline Waste Generation Forms	TBD
Modify Document Change Review Process	$28,800
Reduce Number of Special Procedures	$162,000
Use Graded Approach to Safety Documentation	TBD
Reduce Dosimetry Program	$42,000
Apply Graded Approach to Double RadCon Tech Coverage	TBD
Eliminate Unnecessary Security Certifications	$57,800
Reduce QA Inspector Overtime	$234,000
Eliminate Off-Normal Reports	$990,000
Eliminate Truck Driver Change During Fuel Receipts	$63,300
Assign Pre-Engineered Lifts to Operators	$83,300
Reorganize SNF Department	$350,000
Leave Rover Equipment in Cell ($3,300,000 in FY-98 Only)	$0
Eliminate Unnecessary Bulk Chemical Analyses	$211,200
Reduce Radiography Requirements	$50,000
Reuse Contaminated Tools	$100,000
Use Graded Approach to Contamination Survey Frequency	$32,300
Use Grade Approach to CMTRs	TBD
Improve Craft Training Scheduling	TBD
Improve PM Program	TBD
Eliminate Unnecessary Radiological Training	TBD
Improve Training Plans	$282,100
Allow Use of More Socket Welds	$99,000
Eliminate 5th Crew	TBD
Eliminate High Temperature Feasibility Studies	TBD
Reduce Criticality Alarm System	TBD
Reduce Program Support Organizations	TBD

CONCLUSION

Cost effectiveness at ICPP is a major thrust in FY-96. Work packages were redlined earlier this fiscal year to develop activity baselines within the reduced budget allocation. This redlining effort included a substantial amount of cost savings. A budget review was then performed to ensure that ongoing activities had sufficient, but not excess, funding to meet activity milestones and deliverables. The budget review identified several million dollars for reallocation to below-the-line, high-priority activities. The Process Efficiency Improvement Activity was undertaken to increase productivity and thereby realize cost savings.

As a result of reviewing current work processes and procedures and identifying nonvalue-added steps for elimination, the first phase of the Process Efficiency Improvement Activity has identified $1.8M in FY-96 cost savings and more than $17M in estimated annual cost savings. Several of the identified process improvements can be completed in the near future with minimal implementation barriers. These near-term, Phase I, process improvements have been evaluated for estimated cost savings, with the savings adjusted based on improvement implementation costs and funds already expended to date. The approved Phase I recommendations and the associated implementation plans were submitted to the sponsors for endorsement and formed the basis for the change control packages submitted to the ICPP Change Control Board for approval and subsequent implementation.

Phase II of the Process Efficiency Improvement Activity will be started in the second quarter of FY-1996. An action plan will be developed for Phase II and will consist of three basic elements:

1. A "top-down" senior management review to eliminate unnecessary ICPP work scope and extend the impact of the Phase I recommendations.
2. Implementation of "longer term" recommendations identified in Phase I and extension of some recommendations to additional ICPP processes.
3. Identification of recommendations in areas not previously investigated.

Appendix A

Phase I Recommendation Descriptions and Actions

No	Title	Description	Actions	Assignment
1	Increase Use of Job Safety Analyses	Expand the use of Job Safety Analysis (JSA), where applicable, in lieu of Hazardous Work Permits (HWP).	Delete WSOP WS-301, "Hazardous Work Permits", and replace with a Management Control Procedure identifying limited work situations when an HWP is required.	Stuart
2	Streamline Occurrence Reporting	Implement DOE Order 232.1, effective 10-30-95, which relaxed occurrence reporting criteria, resulting in an estimated 18% fewer off-normal occurrences.	Train authors and transmitters of occurrence reports regarding the updated criteria.	Salcido
3	Eliminate Test Results Review Team	Eliminate the Test Results Review Team (TRRT), which provides an independent review of Systems Operability (SO) test results subsequent to Quality Assurance approval of SO test results.	Modify WE-23 procedure to eliminate the TRRT.	Salcido
4	Streamline Review of Plant Changes	TS 10E3.2 requires all physical changes to plant equipment be approved by 4 departments and changes outside the safety envelope be approved by DOE-ID prior to start of installation, resulting in several layers of review and approval. The process for screening and determination of potential unreviewed safety questions (USQ) is performed sparately. Proposal cancels TS 10E3.2 and requires DOE-ID approval only if the action is a USQ, in which case the USQ process is used.	Cancel TS 10E3.2, requires DOE approval. Revise Engineering Practices Manual. Revise WE-8.	Landon
5	Improve Graded Approach of Quality Levels	Change procedure WE-1, Quality Level and Safety Class Item Designation, to implement LITCO procedure MCP-540, Assignment of Quality Levels. This will correlate the quality level and rigor of review with the hazard category. Since there are no hazard category I facilities at ICPP, there will be no quality level I items.	Revise WE-1. Revise WE-8. Revise Engineering Practices Manual.	Valentine Valentine Landon
6	Reduce Bioassay Samples	Currently, nearly all Radiological II workers at ICPP are in a bioassay program. Due to the mission change at ICPP, this large number of samples does not represent the potential for monitoring internal dose at the required level. The number of samples could be reduced by 75%, taking samples from a representative percentage of workers as well as any worker who may be involved in circumstances where a potential for 100 mrem internal dose exists.	Change Technical Basis document.	Stuart
7	Reduce RCTs Required for Moving Hot Dirt	Five RCTs have been providing coverage to transport fill dirt from "hot" dirt piles to the Tank Farm. Conditions have changed and the remaining dirt is lower risk to transport, allowing the use of only two RCTs to provide adequate coverage.	Complete.	
8	Reduce 603 Basin Water Sampling	Although the CPP-603 basin water chemistry is basically stable, samples are taken once a week. Based on chemistry stability, sampling once per quarter will meet the needs of the facility for tracking PH, Chloride, Nitrate, and gamma scan.	Revise the TS sampling requirement. Revise the sampling procedure.	Olson

No	Title	Description	Actions	Assignment
9	Reduce FAST Basin Water Monitoring	Each week, two samples are pulled from each of six fuel storage pools resulting in six individual samples and one composite sample. Additionally, three samples are taken in the recirculation loop. The samples are analyzed for pH, conductivity, Chloride ion, gamma scan, and Strontium 90. The composite sample can be eliminated. On-line pH and conductivity monitoring instrumentation can be installed and the pH and conductivity sample analyses eliminated. The Strontium 90 analysis can be performed monthly instead of weekly.	Install on-line pH monitoring instrumentation. (in progress to satisfy a UOR corrective action) Install on-line conductivity instrumentation. (in progress to satisfy a UOR corrective action) Revise TS 5.6B5 to delete conductivity measurement as Group I instrumentation. Revise TP 4.5.3.36.	Olson
10	Reduce FAST Stack Monitoring	CPP-666 stack monitoring is operated as a Group I instrument with monthly filter sampling and reporting. Since FDP is shutdown, the montioring should be reduced to Group III instrumentation with semiannual filter sampling and reporting. The PM frequency should be changed from monthly to quarterly and calibration should be changed from monthly to annually.	Modify TS 5.6B5. Modify TS 4.3B3. Revise associated procedures.	Olson
11	Improve Process for Obtaining Radiological Instrument Readings	Currently, an RCT takes readings from RAM and CAM instruments in several process areas at ICPP. These readings can be taken by process operators during routine process data readings and facility inspections and the data provided to an RCT for any necessary analysis.	Change MCP-93. Revise associated guidance documents.	Stuart
12	Modify RCT Utilization During Off-Shifts	The mod-shift HP is upgraded to supervisor resulting in less HP coverage, which often causes overtime and elevates costs. Instead the mid-shift RCTS should report to the area shift supervisor.	Revise applicable procedures. Issue policy letter.	Stuart
13	Reduce Main Stack Monitoring	The main stack is currently sampled on a daily basis. This can be changed to monthly sampling and allow safe operations.	Change Environmental Monitoring Plan. Modify associated procedures.	Stuart
14	Reduce Tank Farm Monitoring	RCRA characterization of waste solutions is conducted annually on the tank farm. The characterization could be eliminated for tanks in which conditions have not changed since the last characterization.	Change the WAP and HLLWE Run Plan.	Sinclair
15	Reduce Percolation Pond Checks	Although the percolation ponds have been RCRA closed, daily checks are made. The frequency of these checks can be safely changed from daily to weekly.	Modify associated procedures. Modify data sheets.	Oswald
16	Reduce Number of Sample Trip Blanks	Currently, service waste trip blanks are collected once a week. The collection of trip blanks can be reduced from weekly to monthly.	Modify procedure.	Oswald, Olson
17	Obtain WCR Readings Remotely	RCRA surveillance checks are performed at WCF four times per day, requiring operator entry. These checks can be made once per week. Additionally, the instrumentation can be moved to allow the readings to be taken remotely from CPP-601 or NWCF.	Implement work order #161818. (in progress) Modify data sheets.	Oswald

No	Title	Description	Actions	Assignment
18	Reduce Deep Tank Monitoring	The deep tank control room is entered once per shift for sparge checks. Checking the alarms located in the CPP-601 corridor is adequate. Additionally, RCRA checks are performed once each day in the deep tank control room, requiring Zone I protective clothing, although the area is essentially radiologically clean.	Complete.	
19	Reduce Bulk Chemical Readings	Although NWCF is not operating, bulk chemical inventory readings are taken once per day. While the NWCF is down, these readings can be taken once per week.	Modify Bulk Chemical Inventory Sheet.	Oswald
20	Reduce Fuel Charger Wrappings	Three cask bags are required to wrap chargers prior to transfer even though surveys show little or no contamination on the cask following wash and wipe down. Since the cask is considered clean, one cask bag will be placed on the bottom of the cask and the charger placed in the catch pan.	Modify procedure.	Olson
21	Modify Cask Water Filling Procedure	It takes approximately 20 minutes to fill the Peach Bottom or NFS 100 cask, during which time no other work is performed. The lid bolts can be safely loosened during the first 15 minutes of the filling operation and the operators can move away from the cask for the final 5 minutes in the event there is any overflow.	Modify the procedure.	Olson
22	Eliminate Unnecessary Cask Surveys	Due to internal requirements, the NFS 100 cask is given an incoming survey to meet 49CFR shipping requirements and is then given an extensive "grid" survey. No other cask is required to have the same rigor when surveyed. The grid survey requirement can be safely eliminated.	Complete.	
23	Implement Lift Ring Stand	Entries into a contamination area are required to attach the CRNY-FS-950 to the 903 crane. The use of a stand to position the lifting ring for attachment will reduce entries.	Complete modifications to the ring stand.	Olson
24	Streamline Fuel Movement Plan Development	Fuel Movement Plans (FMPs) are developed as the first step in the process to transfer each phase of fuel from CPP-603 to FAST. There is no specified format or content requirements for the FMPs, resulting in increasingly detailed plans. Content requirements should be determined, as well as format requirements if necessary.	Document FMP content requirements.	Olson
25	Improve HLW Operator Utilization	Manpower is not being utilized efficiently in the Waste Processing Operations Department. Many activities can be performed by personnel with minimal cross-training. The working groups within the department should be combined to allow improved utilization.	Combine working groups within department.	Oswald
26	Reduce FPF Electrical Power Costs	Lighting at FPF is provided by construction light cords powered by temporary load centers throughout the building. Lights are left on 24 hours per day to facilitate operator surveillance tours that were previously performed once per day. A motion activated light can be installed at the entrance and all lights operated at the breakers.	Install motion activated light. (in progress) Identify and label breakers for lighting on load centers.	Oswald

No	Title	Description	Actions	Assignment
27	Reduce FPF Surveillance and Maintenance	120 emergency lights and 33 exit lights are located throughout FPF, requiring maintenance, monthly checks, and replacement of battery packs and bulbs. These lights can all be disabled and flashlights can be used as back-up power for entries.	Remove battery packs, remove lights, and post exit signs. Modify procedure for surveillance to require flashlights. Cancel monthly checks and PMs.	Oswald
28	Eliminate Unnecessary WCF Work Orders	Although WCF is scheduled to be grouted, work orders are in the system to correct safety concerns. The work orders have been evaluated and risk-benefit evaluations performed to determine which work orders could be canceled.	Complete.	
29	Eliminate Rover As-Builts	Deactivation and equipment removal in Rover has generated several work packages with ECRs that are scheduled to be as-built. All as-building for Rover except for utility and chemical lines have been placed on inactive status.	Complete.	
30	Eliminate Step-off Shoe Covers	Personnel exit a contamination area in CPP-603 to a posted step off pad and, with shoe covers on, walk to a wurvey station. Since step off pads are routinely surveyed and are considered clean, the use of shoe covers to walk from a clean area to a survey station is unnecessary.	Expand action beyon CPP-603.	Stuart
31	Eliminate Dynomometer Usage	As required by the hoisting and rigging manual, dynomometers are presently required for FHU lifts in the FAST facility. The dynomometers offer no protection against hang up since the crane can not stop upward movement quickly enough to prevent damage. A snubber would be more appropriate.	Determine risk of hang up. Modify 5519X forms. Modify procedures.	Olson
32	Reduce Rigging/Crane Checks	Technical Standard 16B3 requires rigging/crane checks prior to use each shift. Rigging checks can be performed once per month and documented on form 5519X and cranes checked once per day prior to first use each day.	Deactivate TS 15B3. Modify WP-31 and associated procedures to discontinue use of 5519AX form.	Hopla Olson Oswald
33	Reduce SO Testing Signatures	Currently, three people (engineering, quality, and operations) sign off on SO tests. Using a graded approach, two signatures should be sufficient.	Modify WE-19.	Grow
34	Modify Load Testing Procedure	The Hoisting and Rigging Manual requires 10 minutes hold time for load testing, but does not address fuel buckets. For fuel buckets the hold time can be safely reduces to 1 minute since they are designed with a safety factor of three.	Define necessary testing. Complete ECRs, WOCs, etc. to modify requirements.	Olson
35	Reduce Meggar & Continuity Testing	Meggar and continuity testing is required on all new wire installations and reterminations. This requirement can be eliminated for low voltage (600V) wire and loads less the 100 amps. A graded approach should be used for higher voltage work.	Revise guide specifications for service entrance connections, high risk areas, and high voltage work.	Grow

No	Title	Description	Actions	Assignment
36	Downgrade Calibrations	Military Standard MIL-STD-45662A, Calibrations Systems Requirements, contains the requirements for establishing and maintaining a calibration system for measuring and test equipment (MT&E). The standard has been inappropriately applied to process instrument calibrations. DOE Order 5700.6E, which specified the standard, has been canceled. The standard should be applied to MT&E only.	Revise MCP-2391 to correctly apply standard. Revise PRD. Revise WE-3. Revise worksheets.	Valentine
37	Streamline Utility Outage Approvals	Outage requests are generated each time utilities are isolated for maintenance activities, requiring the notification of five departments. Any changes in the isolation valving or additional work instructions requires notification of these departments even if the change does not change the intent of the original outage. Of the 16 H&V systems that require outages, six should require facility custodian notification only.	Modify the following procedures: 4.4.5.6, 4.4.5.8, 4.4.5.10, 4.4.5.11, 4.4.5.12, and 4.4.5.36	Chigbrow
38	Streamline Fire Extinguisher Checks	Utility Operations has a support technician check all fire extinguishers throughout ICPP on a monthly basis to comply with NFPA requirements. All facilities with an active RCRA inspection program also perform monthly checks of fire extinguishers in affected areas to comply with RCRA requirements. The RCRA inspection information is sufficient for NFPA requirements, negating the need for Utility Operations checks of the affected extinguishers.	Issue required reading for RCRA inspectors to sign off and punch the inspection card.	Hopla, Oswald, Olson
39	Improve PM Program	The frequency of all PMs should be evaluated and the intervals lengthened when possible. PMs should be eliminated in instances where the PM cost exceeds the replacement cost. Eliminate unnecessary PM in CPP-601 due to current operating level.	Evaluate PMs to lengthen interval or eliminate where feasible.	Hopla
40	Improve Office and Storage Facility Utilization	Not all office facilities are being utilized to the maximum extent possible, including unnecessary use of leased facilities, trailers, and temporary buildings. The use of office space should be maximized and high cost lease facilities should be eliminated where feasible.	Perform space utilization study for office areas.	Hopla
41	Inactivate Surplus Facilities	Several buildings not being used still have all utilities available as well as freeze protection, surveillances, and custodial services.	Identify inactive buildings. Isolate utilities and eliminate services for buildings.	Hopla
42	Conserve Electricity	Existing plant policy does not include an aggressive plan to control and reduce electrical energy consumption. A policy should be implemented to reduce consumption including perimeter lighting, office lights, computer systems, timers on water heaters, and thermostat settings.	Issue letter for energy conservation.	Hopla

No	Title	Description	Actions	Assignment
43	Eliminate Unnecessary Respirator Training	Many personnel who maintain current respirator training status seldom use a respirator. Many people have maintained current status due to inability to complete training quickly when required. Shoule only train those individuals who have a need for the training.	Issue letter regarding respirator training.	Murphy, Oswald, Olson
44	Modify Freeze Protection Approach	In accordance with the Freeze Protection Program, operators record outside temperature every two hours from September 15 through April 15 and perform facility inspections as frequently as every two hours. A graded approach should be implemented and procedures changed to reflect the new WP-33 guidelines. Additionally, FPF tours can be performed weekly rather than daily.	Modify procedures to allow graded approach.	Hopla, Oswald, Olson
45	Eliminate Bulk Liquid Nitrogen	Bulk liquid nitrogen is stored in VES-WO-129 & 130 and is used to supply shielding window purges in FAST, back-up air for the Service Waste Diversion System, and back-up air for the APS exhaust blower dampers. Fast is in the process of installing a different system for shielding window purges and nitrogen bottles can be used for the exhaust blower dampers. Bulk nitrogen is no longer required.	Modify CPP-605 and 666. Modify associated procedures. Cancel nitrogen deliveries. Make separate arrangement for lab nitrogen.	Olson Oswald, Olson Oswald Hunter
46	Reduce Use of Plant Blue Coveralls	Historically, the issuing of blue coveralls fulfilled a variety of needs including the need for a layer of clothing beneath the protective clothing required for working in radiologically controlled areas. Modesty clothing/scrubs have now taken the place of blues in this instance. Many jobs and areas no longer require blues, although it has become commonplace to wear them. Blues should only be provided for chemical or "dirty" jobs.	Develop policy regarding issuance of plant blue coveralls.	Hopla

Appendix B

Recommendation Spreadsheet

No.	Title	Annual Savings	FY-96 Savings	Work Package	Reduction	CCB Amount	Comments
	PAPERWORK/REVIEW REDUCTION						
1	Increase Use of Job Safety Analyses	$135,000	$88,630				
1				1.2.3.1.1.1	$5,430	$5,430	
1				1.2.3.1.1.3.2.A	$970	$970	
1				1.2.3.1.1.3.2.B	$970	$970	
1				1.2.3.1.1.3.2.C	$970	$970	
1				1.2.3.1.1.3.2.D	$970	$970	
1				1.2.3.1.1.3.2.E	$970	$970	
1				1.2.3.1.1.3.3.A	$970	$970	
1				1.2.3.2.1.1.A	$7,100	$7,100	
1				1.2.3.2.2.1.1.A	$7,100	$7,100	
1				1.2.3.2.2.2.B	$2,360	$2,360	
1				1.2.3.2.2.2.C	$2,360	$2,360	
1				1.2.3.2.2.2.D	$2,360	$2,360	
1				1.2.3.3.1.1.A	$9,350	$9,350	
1				1.2.3.3.1.1.C	$9,350	$9,350	
1				1.2.3.3.1.2.A	$13,900	$13,900	
1				1.2.3.3.1.2.E	$2,400	$2,400	
1				1.2.3.3.1.2.F	$2,400	$2,400	
1				1.2.3.3.3.4.5.A	$18,700	$18,700	
2	Streamline Occurrence Reporting	$541,800	$353,200				
2				1.2.3.1.1.3.1.A	$2,580	$2,580	
2				1.2.3.1.1.3.1.B	$2,580	$2,580	
2				1.2.3.1.1.3.1.C	$2,580	$2,580	
2				1.2.3.1.1.3.1.D	$2,580	$2,580	
2				1.2.3.1.1.3.2.A	$2,580	$2,580	
2				1.2.3.1.1.3.2.B	$2,580	$2,580	
2				1.2.3.1.1.3.2.C	$2,580	$2,580	
2				1.2.3.1.1.3.2.D	$2,580	$2,580	
2				1.2.3.1.1.3.2.E	$2,580	$2,580	
2				1.2.3.1.1.3.3.A	$2,580	$2,580	
2				1.2.3.1.7.1.4.B	$25,800	$25,800	
2				1.2.3.1.8.1.A.B	$25,800	$25,800	
2				1.2.3.2.1.1.A	$13,200	$13,200	
2				1.2.3.2.2.2.B	$4,400	$4,400	
2				1.2.3.2.2.2.C	$4,400	$4,400	
2				1.2.3.2.2.2.D	$4,400	$4,400	
2				1.2.3.2.6.1.4.C	$42,200	$42,200	
2				1.2.3.3.1.1.A	$13,200	$13,200	
2				1.2.3.3.1.1.B	$9,900	$9,900	
2				1.2.3.3.1.1.C	$6,600	$6,600	
2				1.2.3.3.1.2.A	$11,880	$11,880	
2				1.2.3.3.1.2.B	$2,970	$2,970	
2				1.2.3.3.1.2.E	$5,940	$5,940	
2				1.2.3.3.1.2.F	$5,940	$5,940	
2				1.2.3.3.1.2.G	$2,970	$2,970	
2				1.2.3.3.2.3	$37,500	$0	Soft Savings
2				1.2.3.3.2.4	$37,500	$0	Soft Savings
2				1.2.3.3.3.3	$72,800	$0	Removed in Dec. rebaseline
3	Eliminate Test Results Review Team	$36,000	$30,400				
3				1.2.3.1.5.1.3.A	$7,800	$0	Removed in Dec rebaseline
3				1.2.3.1.5.2.3.A	$7,800	$0	Removed in Dec rebaseline
3				1.2.3.2.2.1.2.D	$3,300	$3,300	
3				1.2.3.2.5.1.3	$7,800	$0	Removed during wk pkg review
3				1.2.3.2.6.1.1.A	$3,700	$3,700	
4	Streamline Review of Plant Changes	$75,800	$40,300				
4				1.2.3.1.1.1	$14,700	$14,700	
4				1.2.3.1.1.3.1.A	$830	$830	
4				1.2.3.1.1.3.1.B	$830	$830	
4				1.2.3.1.1.3.1.C	$830	$830	
4				1.2.3.1.1.3.1.D	$830	$830	
4				1.2.3.1.1.3.2.A	$1,650	$1,650	
4				1.2.3.1.1.3.2.B	$1,650	$1,650	
4				1.2.3.1.1.3.2.C	$1,650	$1,650	
4				1.2.3.1.1.3.2.D	$1,650	$1,650	
4				1.2.3.1.1.3.2.E	$1,650	$1,650	
4				1.2.3.1.1.3.2.G	$1,650	$1,650	
4				1.2.3.1.1.3.3.A	$1,650	$1,650	
4				1.2.3.1.1.3.A	$1,650	$1,650	
4				1.2.3.2.1.1.A	$2,300	$2,300	
4				1.2.3.2.2.1.1.A	$4,500	$4,500	
4				1.2.3.2.2.2.B	$760	$760	
4				1.2.3.2.2.2.C	$760	$760	
4				1.2.3.2.2.2.D	$760	$760	

No.	Title	Annual Savings	FY-96 Savings	Work Package	Reduction	CCB Amount	Comments
5	Improve Graded Approach of Quality Levels	$48,500	$30,680				
5				1.2.3.1.1.1	$12,600	$12,600	
5				1.2.3.1.1.3.2.A	$1,510	$1,510	
5				1.2.3.1.1.3.2.B	$1,510	$1,510	
5				1.2.3.1.1.3.2.C	$1,510	$1,510	
5				1.2.3.1.1.3.2.D	$1,510	$1,510	
5				1.2.3.1.1.3.2.E	$1,510	$1,510	
5				1.2.3.1.1.3.2.G	$1,510	$1,510	
5				1.2.3.1.1.3.3.A	$1,510	$1,510	
5				1.2.3.1.1.3.A	$1,510	$1,510	
5				1.2.3.2.1.1.A	$1,500	$1,500	
5				1.2.3.2.2.1.1.A	$3,000	$3,000	
5				1.2.3.2.2.2.B	$500	$500	
5				1.2.3.2.2.2.C	$500	$500	
5				1.2.3.2.2.2.D	$500	$500	
	Subtotal	**$837,100**	**$543,210**		**$543,210**	**$372,010**	
	MONITORING						
6	Reduce Bioassay Samples	$375,000	$200,000				
6				1.2.3.3.3.2	$200,000	$0	Removed during wk pkg review
7	Reduce RCTs Required for Moving Hot Dirt	$0	$27,600				
7				1.2.3.2.5.4.1	$27,600	$27,600	
8	Reduce 603 Basin Water Sampling	$233,300	$115,000				
8				1.2.3.1.1.1.4.A	$115,000	$115,000	
9	Reduce FAST Basin Water Monitoring	$103,600	$57,100				
9				1.2.3.1.1.3.1.C	$57,100	$57,100	
10	Reduce FAST Stack Monitoring	$29,600	$29,600				
10				1.2.3.1.1.3.1	$29,600	$0	Removed in rebaseline
11	Improve Process for Obtaining Radiological Instrument Readings	$0	$0			$0	Denied by RadCon
12	Modify RCT Utilization During Off-Shifts	$75,000	$0			$0	No FY96 savings
13	Reduce Main Stack Monitoring	$147,300	$0			$0	Req. negotiation w/ State
14	Reduce Tank Farm Monitoring	$99,000	$0			$0	Add'l charact. req'd by State
15	Reduce Percolation Pond Checks	$14,400	$8,600				
15				1.2.3.2.2.2.D	$8,600	$8,600	
16	Reduce Number of Sample Trip Blanks	$1,600	$1,100				
16				1.2.3.2.2.2.D	$1,100	$1,100	
17	Obtain WCF Readings Remotely	$36,900	$23,900				
17				1.2.1.3.2.B	$23,900	$23,900	
18	Reduce Deep Tank Monitoring	$19,800	$14,900				
18				1.2.1.3.2.B	$14,900	$14,900	
19	Reduce Bulk Chemical Readings	$0	$7,900				
19				1.2.3.2.2.1.1.A	$7,900	$7,900	
	Subtotal	**$1,135,500**	**$485,700**		**$485,700**	**$256,100**	
	SPENT FUEL OPERATIONS						
20	Reduce Fuel Charger Wrappings	$529,600	$10,000				
20				1.2.3.1.1.1.2.2.B	$1,400	$1,400	
20				1.2.3.1.1.1.2.5.2.B	$3,400	$3,400	
20				1.2.3.1.1.1.3.1.4.B	$5,200	$5,200	
21	Modify Cask Water Filling Procedure	$0	$0			$0	Denied by RadCon
22	Eliminate Unnecessary Cask Surveys	$35,000	$35,000				
22				1.2.3.1.1.3.2.C	$17,500	$17,500	
22				1.2.3.1.1.3.2.D	$17,500	$17,500	
23	Implement Lift Ring Stand	$1,200	$400				
23				1.2.3.1.1.3.2.C	$200	$200	
23				1.2.3.1.1.3.2.D	$200	$200	
24	Streamline Fuel Movement Plan Development	$5,000	$5,000				
24				1.2.3.1.1.1.3.4.A	$5,000	$5,000	
	Subtotal	**$570,800**	**$50,400**		**$50,400**	**$50,400**	
	HIGH LEVEL WASTE OPERATIONS						
25	Improve HLW Operator Utilization	$435,000	$58,000				
25				1.2.1.3.2.A	$29,000	$29,000	
25				1.2.1.3.2.B	$29,000	$29,000	
26	Reduce FPF Electrical Power Costs	$10,500	$10,500				
26				1.2.1.3.2.B	$10,500	$10,500	
27	Reduce FPF Surveillance and Maintenance	$13,100	$13,100				
27				1.2.1.3.2.B	$13,100	$13,100	
28	Eliminate Unnecessary WCF Work Orders	$0	$13,500				
28				1.2.1.3.2.B	$13,500	$13,500	
29	Eliminate Rover As-builts	$0	$0			$0	Not funded in FY96
	Subtotal	**$458,600**	**$95,100**		**$95,100**	**$95,100**	

No.	Title	Annual Savings	FY-96 Savings	Work Package	Reduction	CCB Amount	Comments
	GENERAL OPERATIONS						
30	Eliminate Step-off Shoe Covers	$12,000	$0				
31	Eliminate Dynomometer Usage	$4,700	$900				
31				1.2.3.1.1.3.2.A	$900	$900	
32	Reduce Rigging/Crane Checks	$44,700	$14,200				
32				1.2.3.1.1.1	$9,690	$9,690	
32				1.2.3.1.1.3.2.B	$1,130	$1,130	
32				1.2.3.1.1.3.2.C	$1,130	$1,130	
32				1.2.3.1.1.3.2.D	$1,130	$1,130	
32				1.2.3.1.1.3.2.E	$560	$560	
32				1.2.3.1.1.3.A	$560	$560	
33	Reduce SO Testing Signatures	$24,600	$24,600				
33				1.2.3.1.5.1.3.A	$8,200	$0	Removed in Dec rebaseline
33				1.2.3.1.5.2.3.A	$8,200	$0	Removed in Dec rebaseline
33				1.2.3.2.5.1.3	$8,200	$0	Removed during wk pkg review
34	Modify Load Testing Procedure	$12,900	$8,030				
34				1.2.3.1.1.1	$2,930	$2,930	
34				1.2.3.1.1.3.2.B	$850	$850	
34				1.2.3.1.1.3.2.D	$850	$850	
34				1.2.3.1.1.3.3.A	$3,400	$3,400	
35	Reduce Megger & Continuity Testing	$37,500	$25,000				
35				EA 64890	$8,400	$0	Removed during wk pkg review
35				EA 99427	$8,300	$0	Removed during wk pkg review
35				EA 99452	$8,300	$0	Removed during wk pkg review
36	Downgrade Calibrations	$74,000	$17,200				
36				1.2.1.3.2.B	$5,700	$5,700	
36				1.2.3.1.1.3.1.D	$2,900	$2,900	
36				1.2.3.2.2.1.1.A	$5,700	$5,700	
36				1.2.3.3.1.2.A	$2,900	$2,900	
	Subtotal	**$210,400**	**$89,930**		**$89,930**	**$40,330**	
	BALANCE OF PLANT						
37	Streamline Utility Outage Approvals	$6,000	$3,000				
37				1.2.3.3.1.2.F	$3,000	$3,000	
38	Streamline Fire Extinguisher Checks	$4,500	$3,000				
38				1.2.3.3.1.2.G	$3,000	$3,000	
39	Improve PM Program	$51,500	$51,500				
39				1.2.1.3.2.B	$1,500	$1,500	
39				1.2.3.3.1.2.D	$33,340	$33,340	
39				1.2.3.3.1.2.E	$16,660	$16,660	
40	Improve Office and Storage Facility Utilization	$224,000	$111,000				
40				D43100000	$20,000	$0	
40				D43200000	$8,000	$0	
40				D43300000	$75,000	$0	
40				D43400000	$8,000	$0	
41	Inactivate Surplus Facilities	$84,100	$84,170				
41				1.2.3.3.1.3.G	$11,700	$11,700	
41				1.2.3.3.1.3.E	$72,470	$72,470	
42	Conserve Electricity	$200,000	$200,000				
42				1.2.3.3.1.3.I	$200,000	$200,000	
43	Eliminate Unnecessary Respirator Training	$88,300	$32,542				
43				1.2.1.3.2.B	$5,300	$5,300	
43				1.2.3.2.1.1.A	$5,300	$5,300	
43				1.2.3.2.2.2.B	$1,760	$1,760	
43				1.2.3.2.2.2.C	$1,760	$1,760	
43				1.2.3.2.2.2.D	$1,760	$1,760	
43				1.2.3.3.3.1.A	$16,662	$16,662	
44	Modify Freeze Protection Approach	$127,200	$95,080				
44				1.2.1.3.2.B	$19,300	$19,300	
44				1.2.3.1.1.3.1.A.B	$5,200	$5,200	
44				1.2.3.2.1.1.A	$8,400	$8,400	
44				1.2.3.2.2.1.1.A	$3,900	$3,900	
44				1.2.3.2.2.2.B	$2,760	$2,760	
44				1.2.3.2.2.2.C	$2,760	$2,760	
44				1.2.3.2.2.2.D	$2,760	$2,760	
44				1.2.3.3.1.1.A	$25,000	$25,000	
44				1.2.3.3.1.2.J	$25,000	$25,000	
45	Eliminate Bulk Liquid Nitrogen	$44,400	$18,000				
45				1.2.3.2.2.2.C	$9,000	$9,000	
45				1.2.3.2.2.2.D	$9,000	$9,000	
46	Reduce Use of Plant Blue Coveralls	$392,500	$0				
	Subtotal	**$1,222,500**	**$598,292**		**$598,292**	**$487,292**	
	TOTAL	$4,434,900	$1,862,632		$1,862,632	$1,301,232	